

1/10

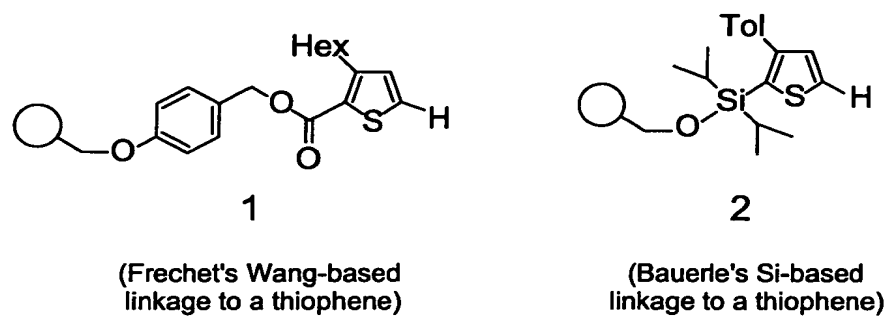


Fig.1

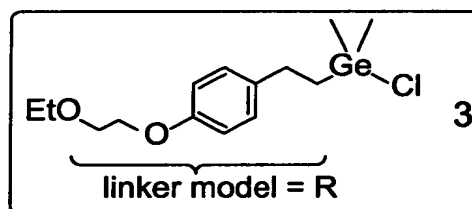


Fig.2

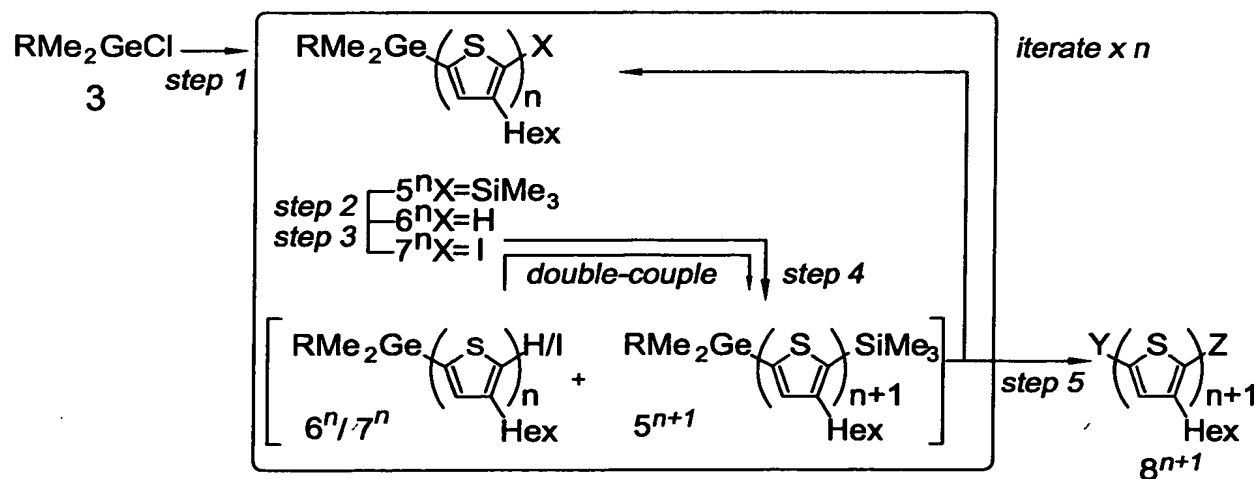


Fig.3

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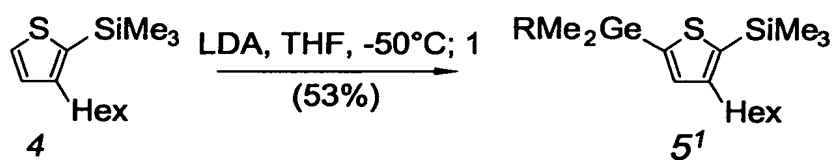


Fig.4

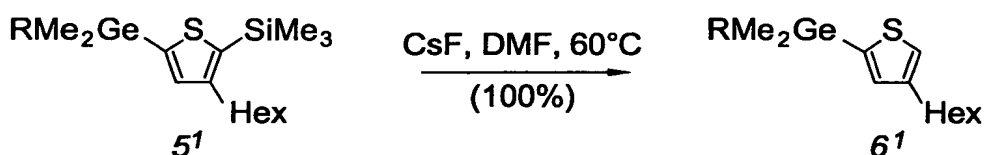


Fig.5

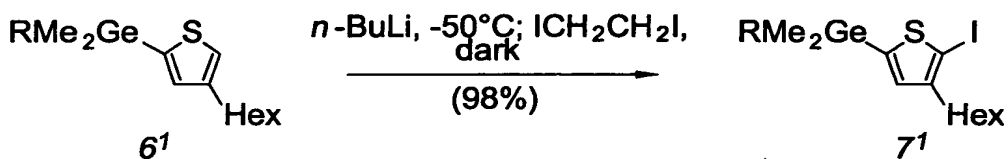


Fig.6

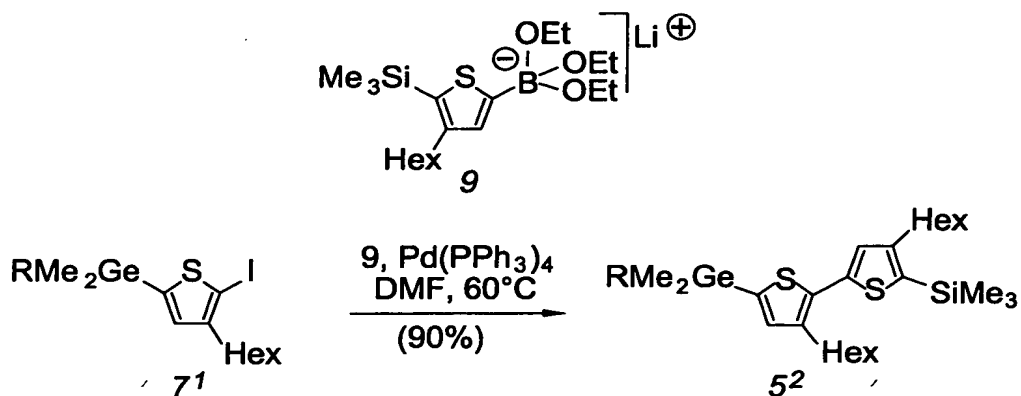
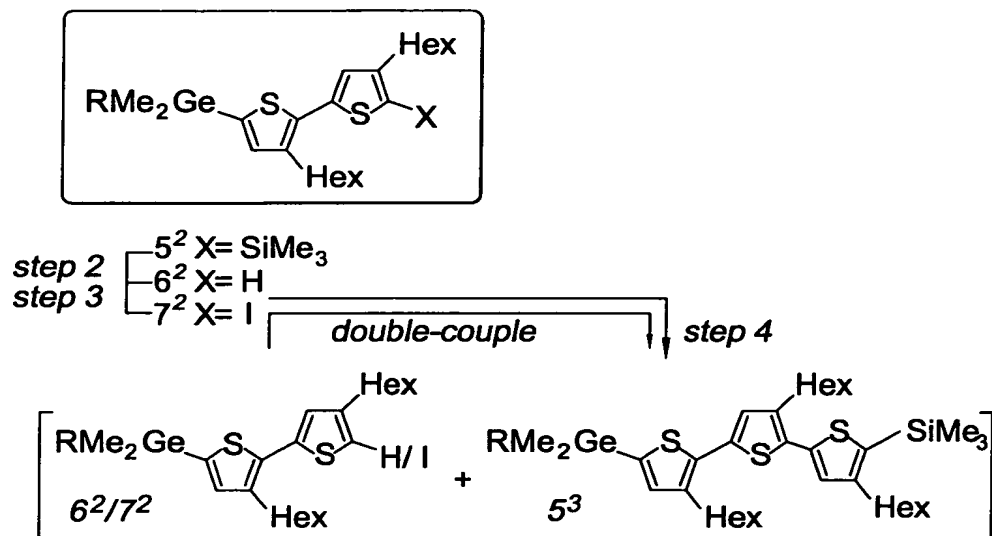


Fig.7

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step 1: CsF, DFM, 60°C (99%); step 2: *n*-BuLi, -50°C; ICH<sub>2</sub>CH<sub>2</sub>I (98%)  
 step 3: 9, Pd(PPh<sub>3</sub>)<sub>4</sub>, DFM, 60°C, double-couple: repeat steps 3-4 (>90%)

Fig.8

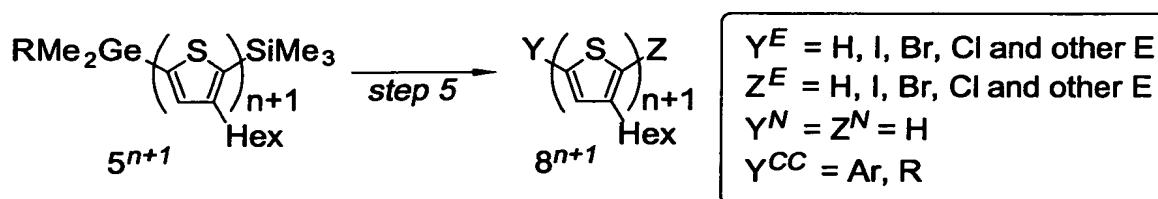


Fig.9

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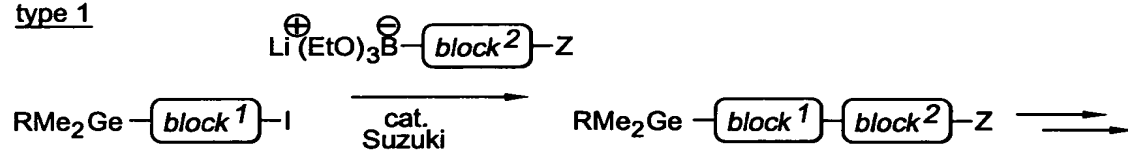
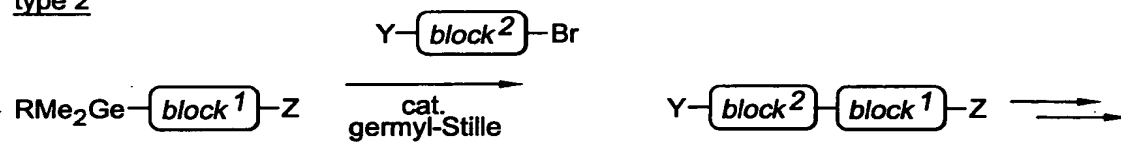
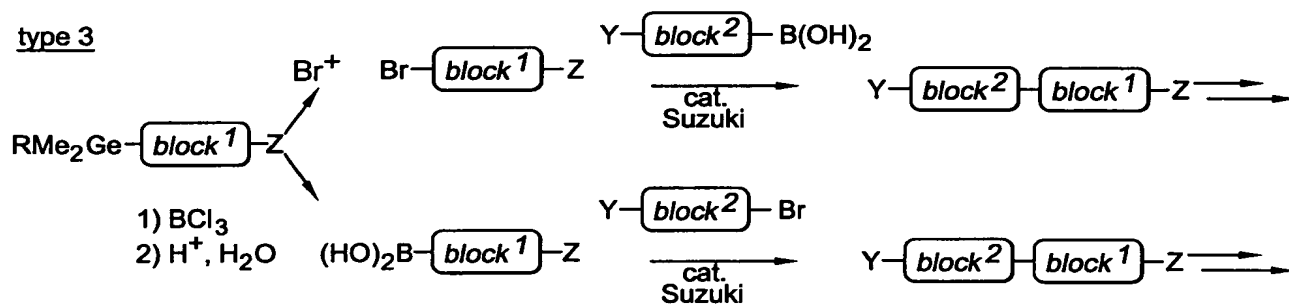
type 1type 2type 3

Fig.10

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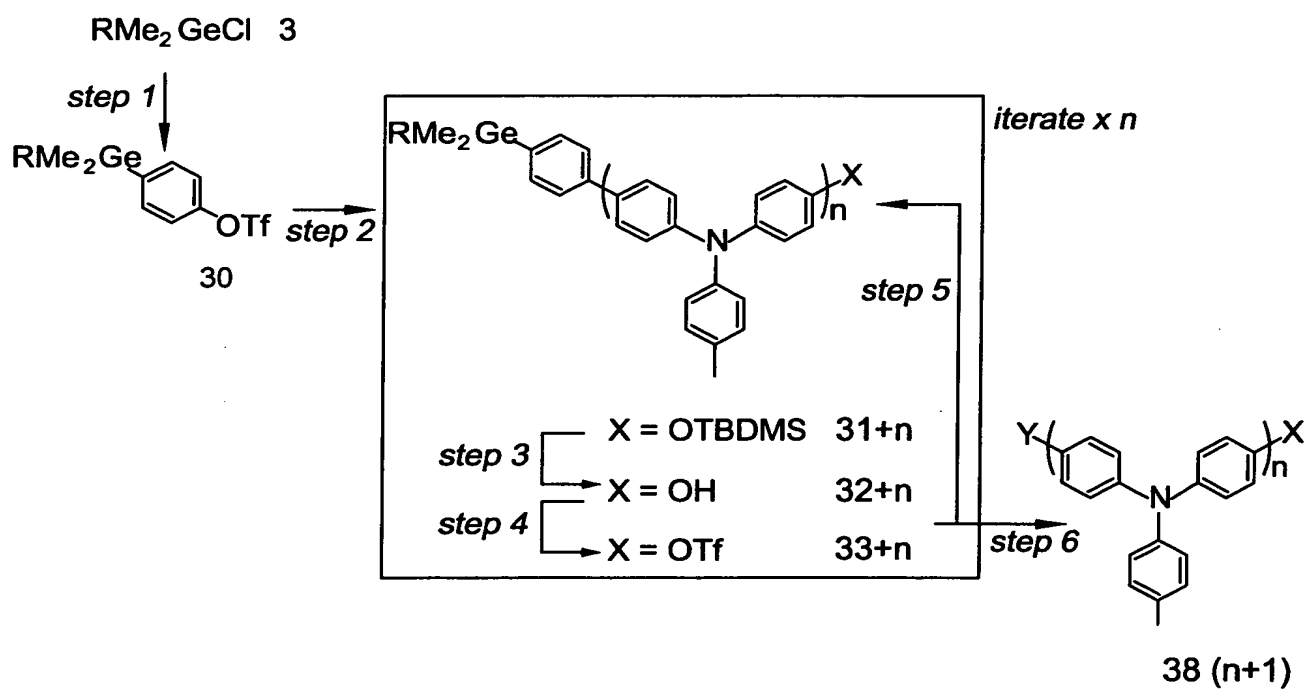


Fig.11

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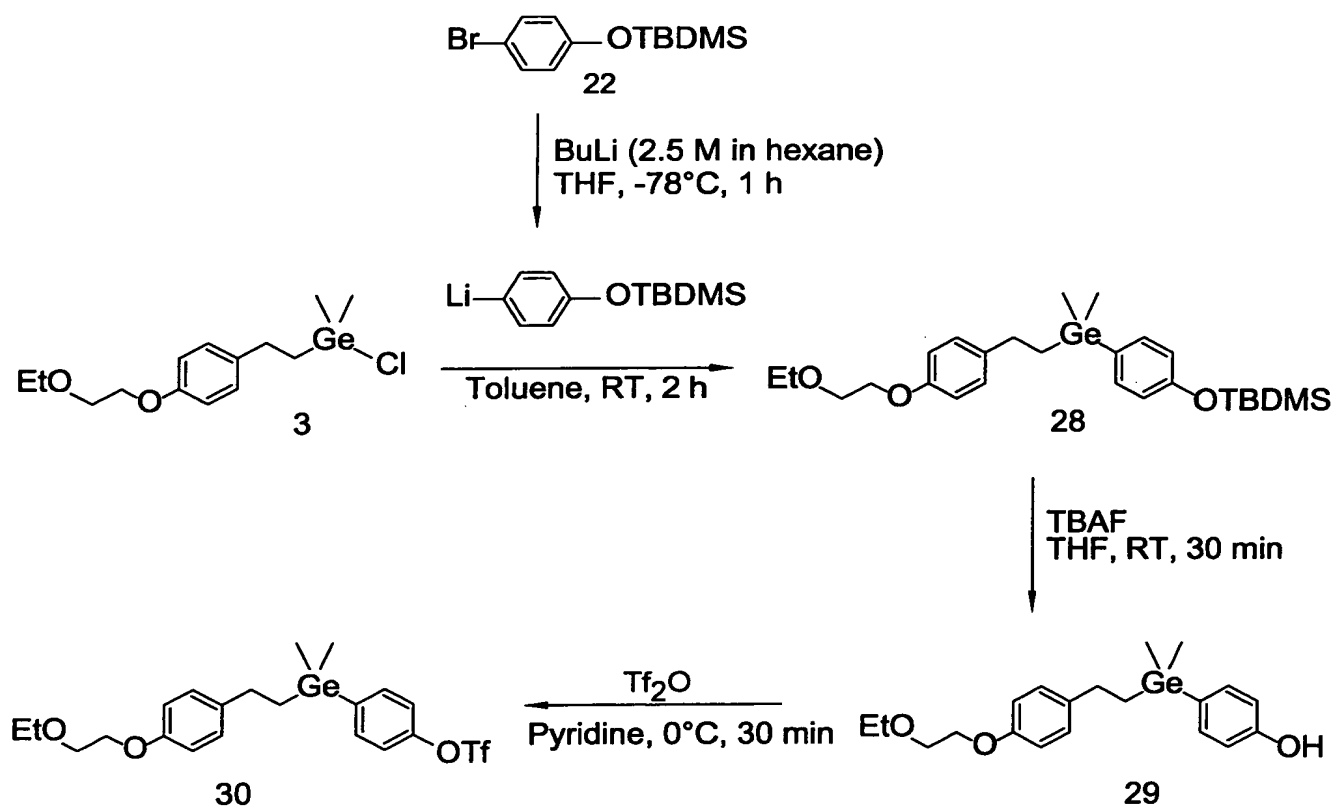


Fig.12

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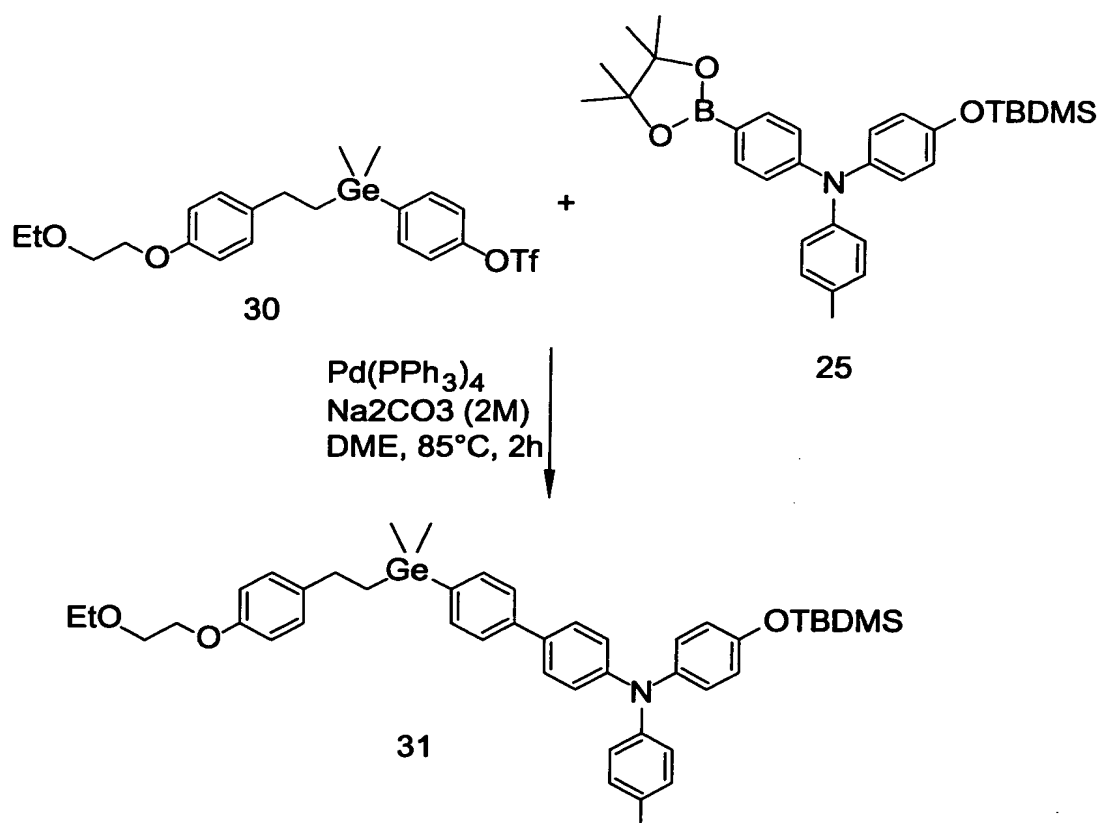


Fig.13

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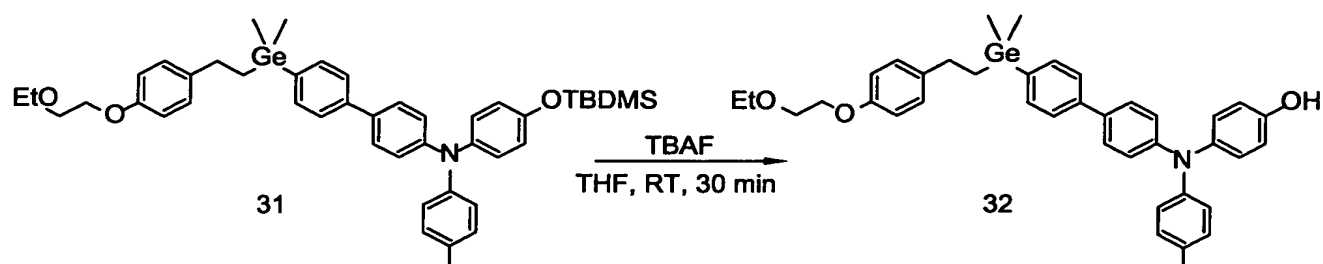


Fig.14

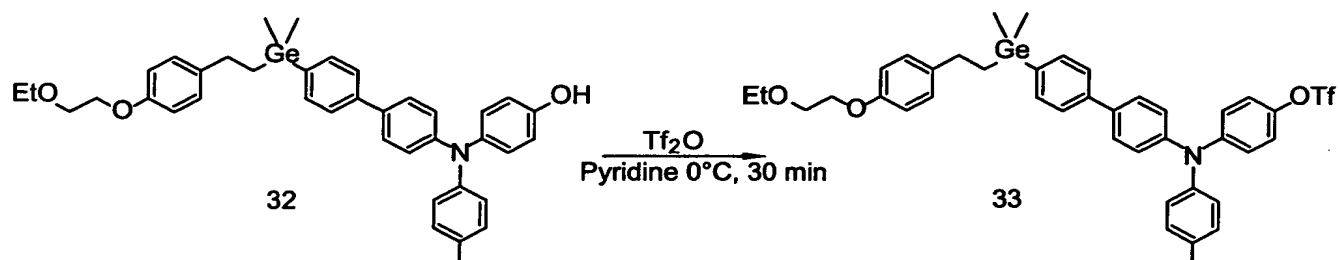
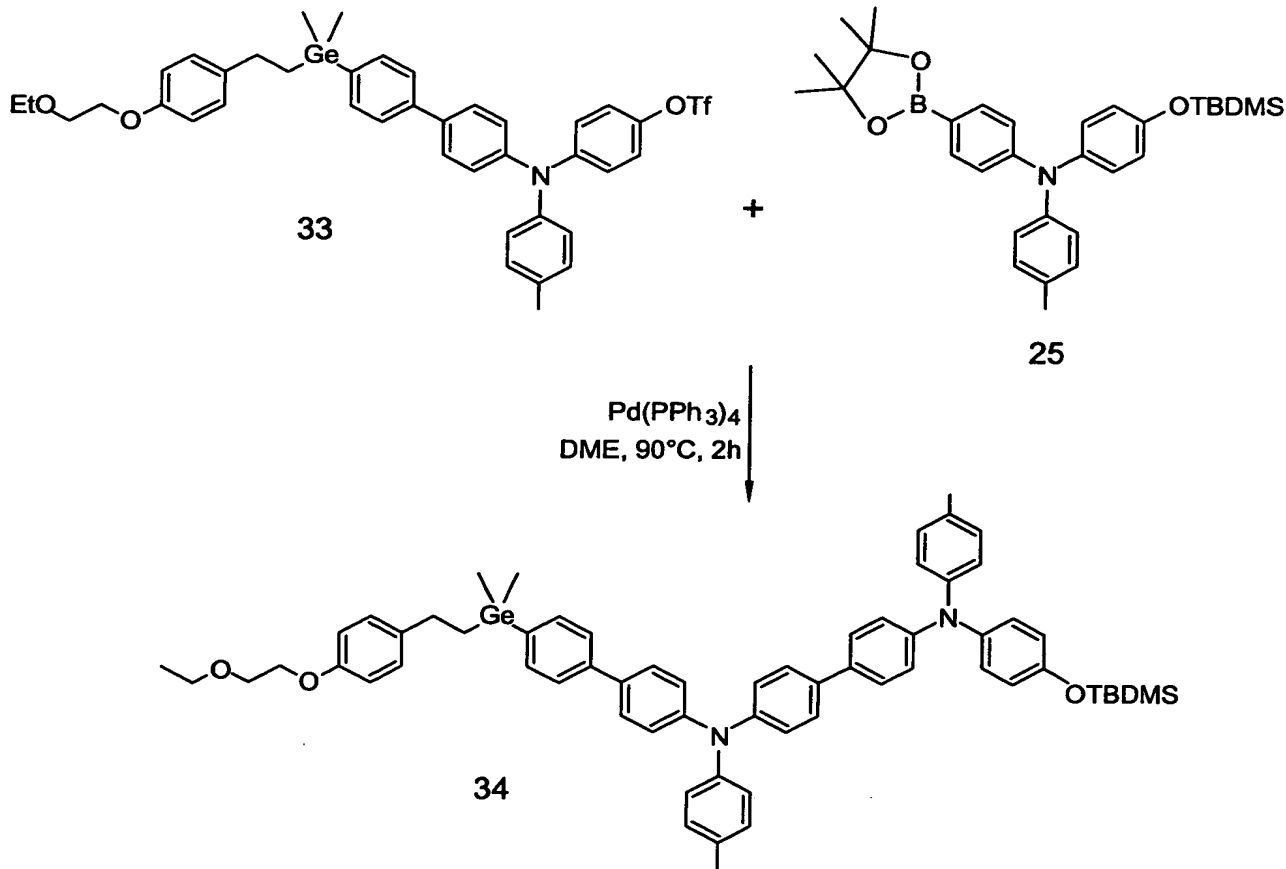


Fig.15



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**Fig.16**

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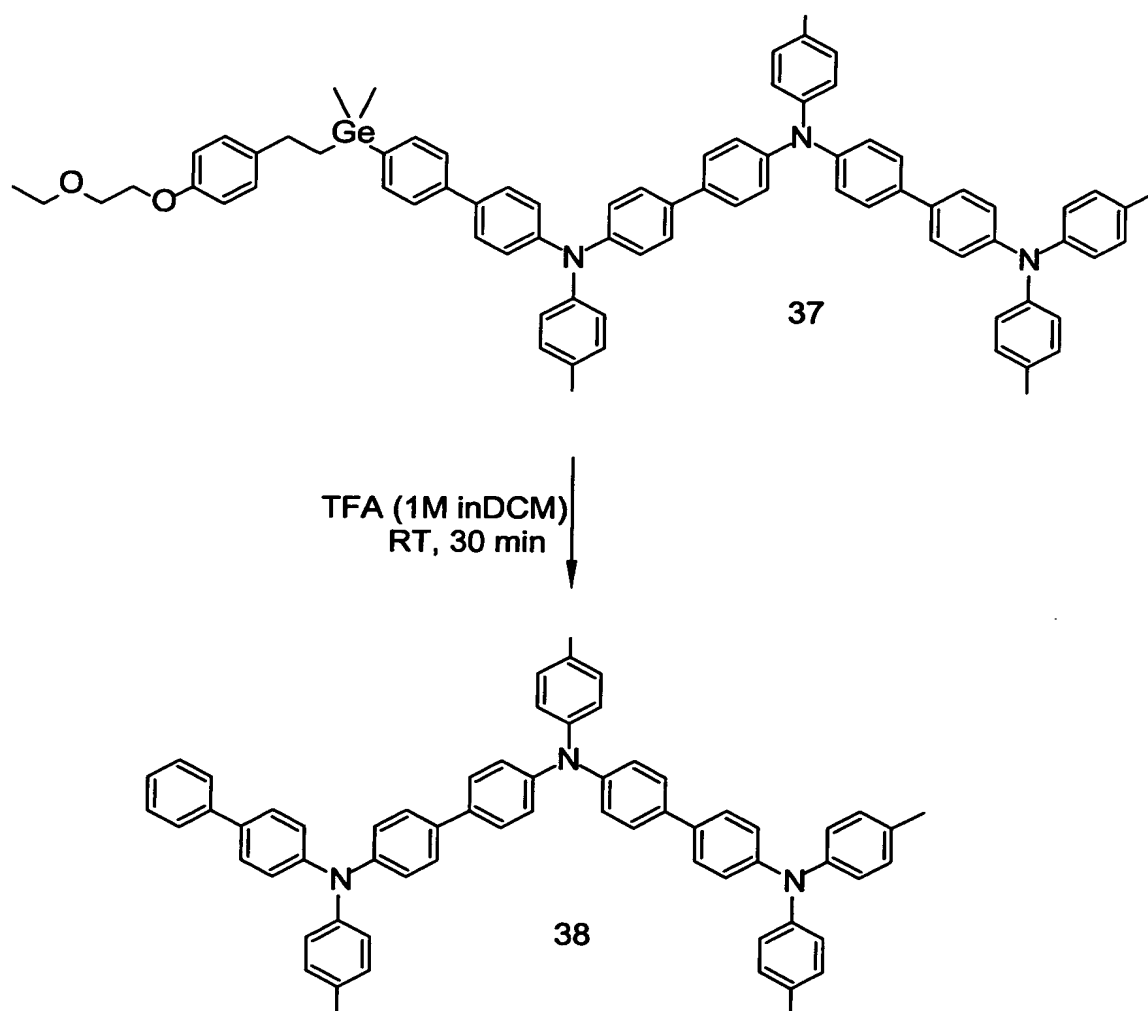


Fig.17